

Attorney Docket No. P-23,090-B USA

PATENT

07-05-02
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re application of: **Bruce K. Redding, Jr., et al.**

Examiner: **D. Becker**

Application No. **09/360,262**

Group Art Unit: **1761**

Filed: **April 24, 1998**

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ORIGINALLY FILED

Attorney Docket No.: **P-23,090-B USA**

For: **Process and Apparatus for Producing Dietary Fiber Products**

CERTIFICATE OF MAILING

I hereby certify that this correspondence, along with any papers indicated as being enclosed, are being deposited as First Class Mail in an envelope addressed to: **Box AF**, Commissioner for Patents, Washington, D.C. 20231 on June 17, 2002.

Wendy H. Lord
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Commissioner for Patents
Washington, D.C. 20231

APPEAL BRIEF

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Sir:

This Appeal Brief is submitted pursuant to 37 C.F.R. § 1.192 within the time specified by

the filing of the Notice of Appeal which has a period set to expire on June 17, 2002.

Adjustment date: 07/05/2002 CHARD1
06/25/2002 SDENB01 00000065 09360262
01 FC:197 -155.00 OP

STATEMENT REGARDING REAL PARTY IN INTEREST

The real party in interest in the present appeal is **VeriSign, Inc.**

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01 FC:220 5.00 CH 155.00 OP

STATEMENT REGARDING RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences known to the appellants' legal representative which will directly affect or be directly affected by, or have a bearing on, the Board's decision in the pending appeal.

STATUS OF CLAIMS

Claims 1, 3-13, and 15-18 have been rejected finally and are all now pending on appeal. No claims have been cancelled or allowed.

STATEMENT REGARDING STATUS OF AMENDMENTS

The applicants amended claims 1, 10 and 11 subsequent to final rejection. Claim 1 was amended to include the elements of claim 2 in order to overcome a rejection under 35 U.S.C. § 102(e). Claims 10 and 11 were amended to address formalities of Markush claiming language. These amendments were entered by the Examiner as indicated in the Advisory Action of February 25, 2002.

SUMMARY OF INVENTION

The present invention as claimed relates to a process for modifying specific properties of dietary fiber material, in particular, water and/or oil holding capacities, the temperature dependency of such properties, and the overall dietary fiber content of such material. The method involves dispersing the dietary fiber material in a liquid media, applying an abrupt pressure change

by mechanical means to the dietary fibers in the liquid media, and recovering the modified material. Certain embodiments of the claimed process *reduce* the water holding capacity and oil retention properties of dietary fibers (see, e.g., claim 10), while other embodiments result in an *increase* in the water holding capacity and oil retention properties of dietary fibers (see, e.g., claim 11). Still other embodiments of the present invention render the modified dietary fibers resistant to changes in their water absorption properties (see, e.g., claim 12), and provide for an increase in the total dietary fiber content of the dietary fiber material so modified (see, e.g., claim 13).

STATEMENT REGARDING ISSUES PRESENTED FOR REVIEW

The issues presented for review are whether the pending claims are patentable over U.S. Patent No. 5,455,342 to Redding Jr. in view of The Polymer Handbook, and in view of Fennema.

GROUPING OF CLAIMS

Claims 1 and 10-13 are independent claims. Claims 3-9 and 18 all depend, either directly or indirectly, from claim 1. Claim 15 depends from claims 1 and 10-13, claim 16 depends from claim 10, and claim 17 depends from claim 11. All of the pending claims are to be considered as a single group, and the patentability of all of the pending claims stand or fall together.

ARGUMENT**A. Procedural Background**

In a Final Office Action, mailed October 19, 2001 (the "Final Office Action"), claims 1, 3-4, 6-7, 9, 15, and 18 were finally rejected under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent No. 5,455,342 to Redding et al. (the "Redding patent"). Claims 2, 5, 8-10, 12-13 and 16 were finally rejected under 35 U.S.C. § 103 based on the Redding patent in view of The Polymer Handbook, and claims 11 and 17 were finally rejected under § 103 based on the Redding patent in view of Fennema. In addition, claims 10 and 11 (and claims 15-17 depending therefrom) were rejected under 35 U.S.C. § 112, second paragraph.

On January 16, 2002, the applicants filed a Response After Final (the "Response") in which they made certain amendments to claims 1, 10 and 11, and cancelled claim 2. As was noted in the Response After Final, claim 2 was not identified in the Final Office Action as being rejected under § 102(e). It was thus recognized that the modification of the particular properties identified in claim 2 is not anticipated by the Redding patent. Claim 1, as amended in the Response After Final, specifies the particular properties of claim 2 (i.e., identifying the modified properties as water and oil holding capacities of the dietary fiber). In view of this amendment, the applicants asserted that the rejection under § 102(e) had been overcome. The applicants also presented arguments in favor of patentability of all of the claims over the combinations of the Redding patent with the two secondary references which server as the bases for the § 103 rejections.

In an Advisory Action, mailed February 25, 2002, (the "Advisory Action"), the Examiner noted that the amendments offered in the Response had been entered and that, in view of such

amendments, the rejection under 35 U.S.C. § 112, second paragraph, had been overcome. The rejections under 35 U.S.C. § 103, however, were maintained "for the reasons of record in [the Final Office Action]...." See Advisory Action at p. 2. The applicants note that the Advisory Action is silent as to whether the rejection under 35 U.S.C. § 102(e) made in the Final Office Action has been maintained or withdrawn in view of the applicants' most recent amendment to claim 1. While it is the applicants' position that only the § 103 rejections are now pending, the applicants nonetheless restate herein the arguments for patentability with respect to both § 102(e) and § 103.

B. The Rejections Under 35 U.S.C. §§ 102(e) and 103 Are Improper

The Redding patent, the primary reference, is directed to the modification of a particular set of properties of polymers, including natural polymers. The specific polymer properties and the direction of modification identified by the Redding patent are: (1) higher melting point; (2) decreased solubility of the polymers in solution; (3) increased viscosity; (4) easier tableting (harder tablets at lower than conventional compression forces); and (5) decreased turbidity in solution. No other properties are specified and the direction of modification for all of the identified properties is unidirectional.

By contrast, the presently claimed method is directed to a set of properties that are completely different from the properties modified by the methods of the Redding patent. Further, the materials which are processed in accordance with the presently claimed method are defined as "particulate dietary fiber" as opposed to "starches" and "other polymers" as characterized in the

Redding patent. Moreover, the Redding patent is lacking in any disclosure or suggestion that certain polymers, entrapped in the form of dietary fiber, be processed in accordance with its disclosed methods to modify the water and/or oil holding properties of the material, to impart a temperature-resistance to changes in water absorption properties, or to increase the dietary fiber content thereof.

To the extent the "particulate dietary fiber" of the present invention is a material that is different from the "starches" and "other polymers" of the Redding patent, the method of the present invention is directed to the modification of *different* properties with respect to *different* materials to accomplish a result not in any way contemplated by the Redding patent. To the extent any particular polymer identified in the Redding patent can be considered suitable as a dietary fiber, the method of the present invention is *still* directed to the modification of *different* properties to accomplish a result not in any way contemplated by the Redding patent. There is nothing in the Redding patent which would suggest an awareness of the problems associated with dietary fibers, or that a set of properties not mentioned in the Redding patent can be modified by the methods of the Redding patent, or the direction of such modification. "Obviousness cannot be predicated on what is unknown." *In re Rijckaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993) (quoting *In re Spormann*, 363 F.2d 444, 448 (C.C.P.A. 1966)). It is submitted respectfully that the modification of the particular properties of dietary fibers identified in the claims of the present invention is not obvious in view of the polymer modification methods of the Redding patent, and that the rejection of claims 1, 3-4, 6-7, 9, 15, and 18 under § 102(e) is improper. In the event this rejection continues to be maintained by the Examiner, the applicants request respectfully that this

basis of rejection be reversed.


The deficiencies in the Redding patent cannot be overcome through combination with either *The Polymer Handbook* or the Fennema reference. As set forth in the Final Office Action, *The Polymer Handbook* is relied upon solely as the source for the disclosure of the use of cellulose. The Fennema reference is relied upon solely as the source for the disclosure of the use of oat bran. There is, however, no teaching or suggestion in either of these references that the processing of dietary fiber materials could, would, or should result in a modification of water and/or oil holding capacities, temperature-resistance to changes in water absorption properties, or an increase in the overall dietary fiber content thereof. Absent such a disclosure or suggestion, the Examiner has not made out a *prima facie* obviousness rejection. Accordingly, it is submitted respectfully that the rejection of claims 1, 3-13 and 15-18 based on § 103 are improper. The applicants request respectfully that this basis of rejection be reversed.

CONCLUSION

In view of the above remarks, the present application is believed to be in condition for allowance, and a reversal the Examiner's outstanding rejections is respectfully requested.

Respectfully submitted,

Dated: 6/17/02



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APPENDIX

Claims involved in the appeal:

1. A process for modifying the water and oil holding capacities of a particulate dietary fiber material consisting essentially of indigestible fiber derived from natural grains and wood products, comprising dispersing said particulate material in a liquid media, applying an abrupt pressure change by mechanical means to said particulate material in said liquid media, and recovering said modified fiber material.
3. The process of claim 1 further comprising drying said modified fiber.
4. The process of claim 3 further comprising subjecting said recovered fiber to mechanical action sufficient to reduce particulate agglomeration.
5. The process of claim 1 wherein said liquid media contains about 10 to about 25 percent by weight of said fiber material.
6. The process of claim 1 wherein said liquid media is subjected to said abrupt pressure change at a temperature of about 25 degrees centigrade.
7. The process of claim 3 wherein said modified fiber is dried at a temperature greater than 25 degrees centigrade.

8. The process of claim 7 wherein said modified fiber is dried at a temperature of about 70 degrees centigrade.

9. The process of claim 3 wherein said modified fiber is recovered by allowing suspended particles to settle and decanting the liquid media.

10. A process to reduce the water holding capacity and oil retention properties of dietary fibers consisting essentially of indigestible fiber selected from the group consisting of dietary cellulose and wheat fibers, comprising preparing a suspension of said fibers in a liquid media, applying an abrupt pressure change to said suspension by means of a piston driven by a compressive air force of about 60 to about 90 psi for about 0.1 to 0.2 sec. and recovering a modified fiber having said reduced properties.

11. A process to increase the water holding capacity and oil retention properties of dietary fibers consisting essentially of indigestible fiber selected from the group consisting of dietary soy, wheat bran, oat and oat hull, comprising preparing a suspension of said fibers in a liquid media, applying an abrupt pressure change to said suspension by means of a piston driven by a compressive air force of about 60 to about 90 psi for about 0.1 to 0.2 sec. and recovering a modified fiber having said increased properties.

12. A process to prepare a dietary fiber material consisting essentially of indigestible

fiber and having water absorption properties that are resistant to change due to temperature increases comprising preparing a suspension of said fibers in a liquid media, applying an abrupt pressure change to said suspension by means of a piston driven by a compressive air force of about 60 to about 90 psi for about 0.1 to 0.2 sec. and recovering a modified fiber having said resistant properties.

13. A process to increase the total dietary fiber content of a dietary fiber material consisting essentially of indigestible fiber, comprising preparing a suspension of said fibers in a liquid media, applying an abrupt pressure change to said suspension by means of a piston driven by a compressive air force of about 60 to about 90 psi for about 0.1 to 0.2 sec. and recovering a modified fiber having said resistant properties.

15. A modified dietary fiber made by the process according to any one of claims 1, 10, 11, 12 or 13.

16. A modified dietary fiber having reduced water and oil holding capacities prepared according to claim 10, wherein said fiber is selected from the group consisting of cellulose and wheat fiber.

17. A modified dietary fiber having increased water and oil holding capacities prepared according to claim 11, wherein said fiber is selected from the group consisting of soy, wheat bran,

oat and oat hull fibers.

18. The process according to claim 1 wherein said particulate dietary fiber material is derived from the group consisting of apple fiber, bran fiber, fig powder, barley bran flour, barley four, high protein, barley fiber brewer's spent grains, oat bran, oat fiber barley, rice, malted germ, pea fiber, bleached corn fiber, powdered cellulose, carrageen gum cellulose gum, prunes, citrus fiber, rice bran, de-fatted cocoa, rice bran-stabilized, corn bran, rice fiber, corn fiber, cellulose fibers, sodium carboxymethyl cellulose, corn flour, soy fiber, corn husks, sugar beet fiber, dried cranberries, wheat bran de-fatted, wheat germ, wheat fiber, oat husks, wheat flour, peanut flour, microcrystalline cellulose, combinations of any number of the above fibers, blends of above fibers in a raw state with their pressure treated versions.